

## Restoring an Architect's Miniature Masterwork

Though a prominent part of New York's skyline—and a symbol of the city itself—the Twin Towers were originally viewed with skepticism. To win over the skeptics, architect Minoru Yamasaki expressed his vision with an elaborately detailed model, today the only surviving three-dimensional representation of the World Trade Center.

The events of September 11, 2001, have imbued the model with significance that its creators could never have imagined. Now part of the American Architectural Foundation's prints and drawings collection, the model has undergone a complete restoration thanks to the congressionally funded Save America's Treasures grant program of the National Park Service.

The model was donated to the foundation's collection in 1992, but little is known about its travels over the past 30 years. What was immediately evident was the urgent need to arrest its worsening condition. The model is seven feet tall and eight by ten feet at its base; its size, weight, and difficult assembly (three hours minimum) did not work in its favor.

"An intriguing and complex period piece in very fragile condition," is how the foundation described it. Delicate by nature, architectural models are easily damaged. Often kept in less-than-ideal conditions—difficult to maintain and store—they are often subject to frequent moves and disassembly. Over the years, this one had suffered warping and water damage. Its adhesives were dried out; corners and edges were broken off and pieces missing. Gone were the molds used for the plastic parts—many of which were gone themselves. Restoration would not be easy.

Since the Twin Towers touched off so much controversy (and even ridicule), one could imagine Yamasaki directing his craftsmen to come up with a winning model. This may explain its complexity and detail, the technical challenge the crew took on to achieve his goal. The model's tiny, finely rendered pieces were cast from one-of-a-kind brass molds injected with a special plastic. All of the pieces were painted by hand employing a custom acrylic used on automobiles. The foundation—noting the creativity and craftsmanship of the model makers—likened it to a jigsaw puzzle.

The grant, for over \$62,000, helped to restore the model to its original state. ALCOA—which developed the twin towers' aluminum cladding—matched it. The restoration was led by a model maker with conservation expertise and the former chief of Yamasaki's model shop, whose knowledge of the firm's techniques for model-building at the time was invaluable. The brass molds were recreated, extra parts made, and original paint analyzed. The entire process was carefully documented. Many of the team's techniques were employed with an eye towards the model's care under future conservators.

The restoration went on exhibit last September at The Octagon Museum, the foundation's headquarters in Washington, DC. Complementing the exhibit were photos taken during the model's original fabrication as well as stills and video of the restoration. The visual record will be crucial to its future care. The model is now on loan to The Skyscraper Museum in New York.

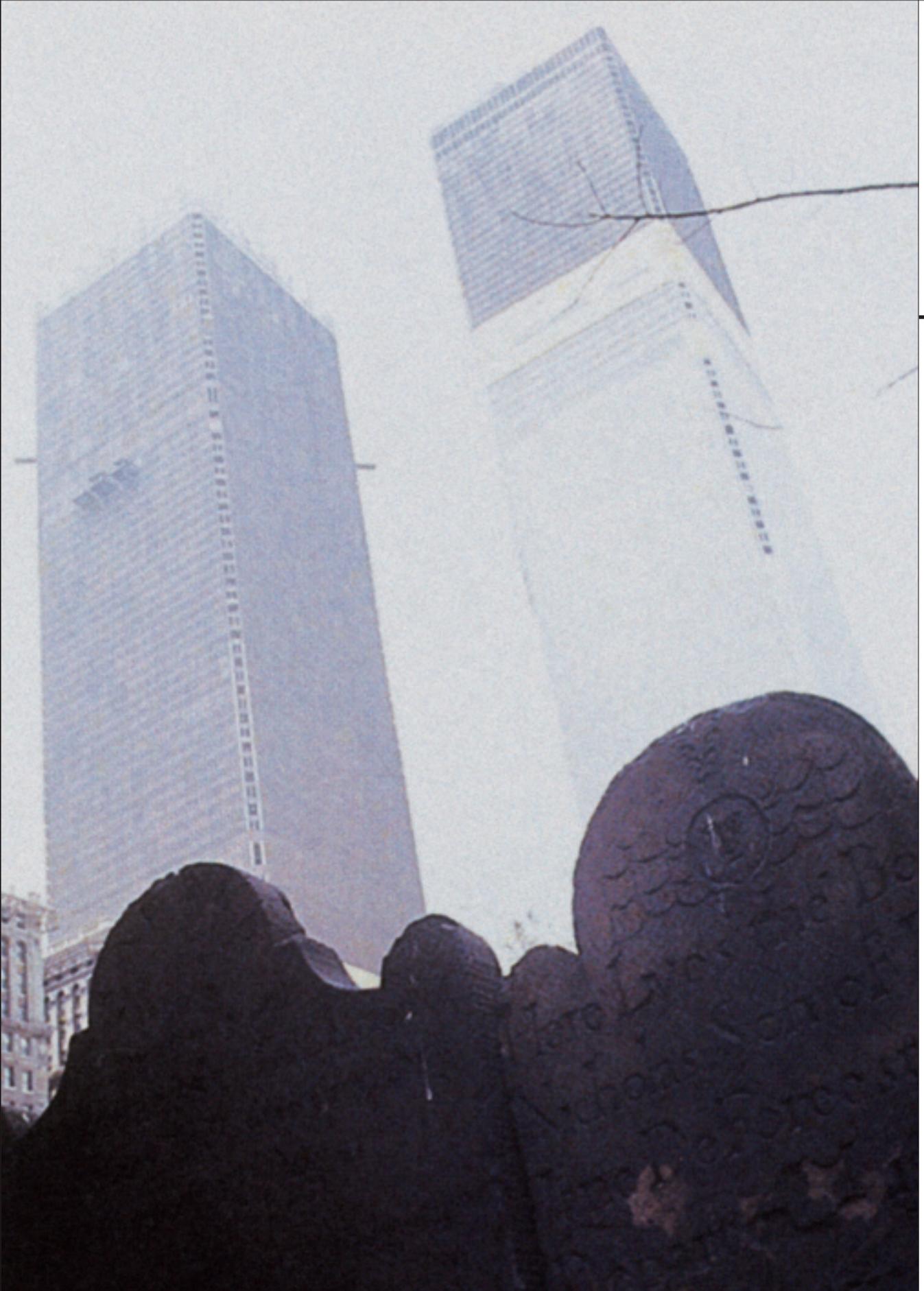
The American Architectural Foundation promotes understanding and appreciation of architecture's influence in our lives; its collection is an internationally renowned repository of photographs, drawings, and models documenting the built environment from the 18th century to the present. The National Trust for Historic Preservation and the Museum Loan Network also provided funding.

**THE RESTORATION WAS LED BY A MODEL MAKER WITH CONSERVATION EXPERTISE AND THE FORMER CHIEF OF YAMASAKI'S MODEL SHOP, WHOSE KNOWLEDGE OF THE FIRM'S TECHNIQUES FOR MODEL-BUILDING AT THE TIME WAS INVALUABLE.**



**Above:** Restored Twin Towers model; **Right:** World Trade Center under construction in 1970.

For more information, contact Sherry Birk, American Architectural Foundation, 1799 New York Ave., NW, Washington, DC 20006, (202) 626-7571, sbirk@theoctagon.org, www.archfoundation.org.



RIGHT: CAMILO VERGARA, LEFT: AMERICAN ARCHITECTURAL FOUNDATION